



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Takamasa Koshizen, Bernd Heisele and Hiroshi Tsujino  
APPLICATION NO.: 10/561,256  
FILING DATE: December 14, 2005  
TITLE: System And Method For Face Recognition  
EXAMINER: Not Yet Known  
GROUP ART UNIT: Not Yet Known  
ATTY. DKT. NO.: 23085-08069

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below:

Dated: 4-13-06

By: Sabra-Anne R. Truesdale

Sabra-Anne R. Truesdale, Reg. No.: 55,687

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**INFORMATION DISCLOSURE STATEMENT**

**Under 37 CFR §§ 1.56 and 1.97-98**

SIR:

Pursuant to the provisions of 37 CFR §§ 1.56 and 1.97-98, enclosed herewith is modified form PTO/SB/08A listing references for consideration by the Examiner.

The filing of this Information Disclosure Statement shall not be construed as a representation regarding the completeness of the list of references, or that inclusion of a reference in this list is an admission that it is prior art or is pertinent to this application, or that a search has been made, or as an admission that the information listed is, or may be considered to be, material to patentability, or that no other material information exists, and shall not be construed as an admission against interest in any manner.

This Information Disclosure Statement is being filed:

- ☒ within three months of the filing date of the application, or date of entry into the national stage of an international application, or before the mailing date of a first office action on the merits, whichever event last occurred;
- ☐ before the mailing of a first official action after the filing of a request for continued examination (RCE) under 37 CFR § 1.114;

- ☐ after three months of the filing date of this national application or the date of entry of the national stage in an international application, or after the mailing date of the first official action on the merits, whichever event last occurred, but before the mailing date of the first to occur of either: (1) a final action under 37 CFR §1.113; or (2) an action that otherwise closes prosecution in the application, and:
  - ☐ attached hereto is the fee set forth under 37 CFR §1.17(p) for submission of this Information Disclosure Statement under 37 CFR § 1.97(c); OR
  - ☐ Applicant certifies pursuant to 37 CFR § 1.97(e) that:
    - ☐ each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement; OR
    - ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated under 37 CFR § 1.56(c) more than three months prior to the filing of this Statement;
- ☐ on or before the payment of the issue fee but after the mailing date of the first to occur of either: (1) a final action under 37 CFR § 1.113; (2) a notice of allowance under 37 CFR § 1.311; or (3) an action that otherwise closes prosecution in the application, and:
  - ☐ Applicant certifies pursuant to 37 CFR. § 1.97(e) that:
    - ☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement;
    - ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained


in this Statement was known to any individual designated under 37 CFR § 1.56(c) more than three months prior to the filing of this Statement; AND

- ☐ attached hereto is the fee set forth under 37 CFR §1.17(p) for submission of this Information Disclosure Statement under 37 CFR § 1.97(d); OR
- ☐ after the payment of the issue fee. Applicant requests that the information contained in this Information Disclosure Statement be placed in the file according to 37 CFR § 1.97(i), although the information may not be considered by the USPTO.
- ☐ Enclosed is a copy of each listed reference that may be material to the examination of this application, and for which there may be a duty to disclose.
- ☐ This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application No. \_\_\_\_\_, filed on \_\_\_\_\_, and the references cited therein are hereby referenced, but are not required to be provided in this application under 37 CFR § 1.98(d).
- ☒ Copies of any foreign patent documents and non-patent literature cited herein are enclosed.
- ☐ Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not received by any individual designated in 37 CFR § 1.56(c) more than thirty days prior to the filing of this Information Disclosure Statement. 37 CFR § 1.704(d).
- ☒ Applicant submits that no fee is required for the consideration of this Information Disclosure Statement.

Consideration of the listed references and favorable action are solicited.

Respectfully submitted,  
TAKAMASA KOSHIZEN

Dated: 4-13-06

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First Named Inventor	Takamasa Koshizen
Art Unit	Not Yet Known
Examiner Name	Nor Yet Known
Attorney Docket Number	23085-08069

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**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document No. Number – Kind Code <sup>2</sup> (if known)	Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
	A1	US-2005/0036676 A1	02-17-2005	Heisele
	A2	US-2003/0044067 A1	03-06-2003	Huang et al.
	A3	US-6,317,517 B1	11-13-2001	Lu

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> – Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T <sup>6</sup>

**OTHER REFERENCES – NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>6</sup>
	C1	ANDERSEN, R.A. et al., "Multimodal Representation of Space in the Posterior Parietal Cortex and Its Use in Planning Movements," Annual Review of Neuroscience, Vol. 20, 1997, pp. 303-330.	
	C2	BEYMER, D. J., "Face Recognition Under Varying Pose," A.I. Memo 1461, Center for Biological and Computational Learning, M.I.T., Cambridge, MA, 1993.	
	C3	BLANZ, V. et al., "A Morphable Model for the Synthesis of 3D Faces, Computer Graphics Proceedings SIGGRAPH," pp. 187-194, Los Angeles, 1999.	
	C4	BRUNELLI, R. et al., "Face Recognition: Features Versus Templates, IEEE Transactions on Pattern Analysis and Machine Intelligence," 15(10), pp. 1042-1052, 1993.	
	C5	DEMPSTER, A.P. et al., "Maximum Likelihood from Incomplete Data Via the EM Algorithm," Journal of the Royal Statistical Society, Series B, Vol. 39, 1977, pp. 1-38.	
	C6	HAXBY, J.V. et al., "The Distributed Human Neural System for Face Perception," Trends in Cognitive Sciences, Vol. 4, No. 6, June 2000, pp. 223-233.	
	C7	HEISELE, B. et al., "Categorization by Learning and Combining Object Parts, Neural Information Processing Systems (NIPS)," pp. 1239-1245, Vancouver, 2001.	
	C8	HEISELE, B. et al., "Component-based Object Recognition, Designing Tomorrow's Category-Level 3D Object Recognition Systems: An International Workshop," Taormina, Sicily, 2003.	
	C9	HEISELE, B. et al., "Component-based Face Detection", Proceedings Of The IEEE Computer Society Conference On	

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

23085/08069/DOCS/1597858.1

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		Computer Vision And Pattern Recognition (CVPR) 2001, Kauai, HI, Vol. 1, September 10, 2001, pp. 657-662.	
	C10	HEISELE, B. et al., "Face Detection in Still Gray Images," A.I. Memo 1687, Center for Biological and Computational Learning, M.I.T., Cambridge, MA, May 2000.	
	C11	HEISELE, B. et al., "Face Recognition With Support Vector Machines: Global Versus Component-Based Approach," Proc. 8 <sup>th</sup> International Conference on Computer Vision, Vol. 2, pp. 688-694, Vancouver, 2001.	
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	C13	HUANG, J. et al., "Component-Based Face Recognition with 3D Morphable Models," Proceedings of the 4 <sup>th</sup> International Conference on Audio- and Video-Based Biometric Person Authentication (AVBPA), June 9-11, 2003 (Lecture Notes in Computer Science, Vol. 2688), Springer-Verlag Berlin, Germany, pp. 27-34.	
	C14	KIM, T-K et al., "Component-Based LDA Face Descriptor for Image Retrieval," Proceedings of the British Machine Vision Conference (BMVC), September 2-5, 2002, Vol. 2, pp. 507-516.	
	C15	KOBAYASHI, S. et al., "Influence of Reward Expectation on Visuospatial Processing in Macaque Lateral Prefrontal Cortex," J. Neurophysiol., Vol. 87, 2002, pp. 1488-1498.	
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	C17	KOSHIZEN, T. et al., "A Computational Model of Attentive Visual System Induced by Cortical Neural Network," Neurocomputing, Vol. 44, 2002, pp. 879-885.	
	C18	KOSHIZEN, T. et al., "Expectation Maximization of Prefrontal-Superior Temporal Network by Indicator Component-Based Approach," Proceedings for CNS 2003, The Annual Computational Neuroscience Meeting, July 5-9, 2003 (Neurocomputing 58-60, 2004, pp. 619-624).	
	C19	LOGOTHETIS, N.K. et al., "Shape Representation in the Inferior Temporal Cortex of Monkeys," Current Biology, Vol. 5, No. 5, 1995, pp. 552-563.	
	C20	MESULAM, M.-M., "Spatial Attention and Neglect: Parietal, Frontal and Cingulate Contributions to the Mental Representation and Attentional Targeting of Salient Extrapersonal Events," Phil. Trans. R. Soc. Lond. B, Vol. 354, 1999, pp. 1325-1346.	
	C21	MILLER, E.K. et al., "An Integrative Theory of Prefrontal Cortex Function," Annu. Rev. Neurosci., 2001, pp. 167-202, Vol. 24.	
	C22	NEAL, R.M. et al., "A View of the EM Algorithm that Justifies Incremental, Sparse, and Other Variants," in Learning in Graphical Models, 1998.	
	C23	PCT International Search Report and Written Opinion, PCT/IB2004/003274, April 6, 2005.	
	C24	PCT International Search Report and Written Opinion, PCT/US2004/021158, March 31, 2005.	
	C25	VAPNIK, V. N., <i>Statistical Learning Theory</i> , 1998, pp. 401-408.	
	C26	VIOLA, Paul, "Complex Feature Recognition: A Bayesian Approach for Learning to Recognize Objects," AI Memo No. 1591,	

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		Artificial Intelligence Laboratory, MIT, Cambridge, MA, November 1996.	
	C27	WAHBA, G., "Support Vector Machines, Reproducing Kernel Hilbert Spaces, and Randomized GACV," Chapter 6 of <i>Advances in Kernel Methods – Support Vector Learning</i> , Eds. B. Schölkopf et al., The MIT Press, 1999, pp. 69-88.	
	C28	WALLRAVEN, C. et al., "View-Based Recognition of Faces in Man and Machine: Re-visiting Inter-Extra-Ortho, Lecture Notes in Computer Science," 2525, pp. 651-660, 2002.	
	C29	WISKOTT, L. et al., "Face Recognition by Elastic Bunch Graph Matching, Chapter 11 of <i>Intelligent Biometric Techniques in Fingerprint and Face Recognition</i> ," Eds. L.C. Jain et al., CRC Press, pp. 355-396, 1999.	

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